

## **REMARKS**

In the last Office Action, the Examiner rejected claims 27-29, 31, 32, 34, 36, 38-40, and 42 under 35 U.S.C. § 102(e) as being anticipated by Amiel et al. (U.S. Patent No. 6,656,640); rejected claims 27-29, 31, 32, 36, and 38-40 under 35 U.S.C. § 102(b) as being anticipated by Saito et al. (U.S. Patent No. 5,972,538); rejected claims 30, 46, 47, and 52 under 35 U.S.C. § 103(a) as being unpatentable over Amiel et al. in view of Ludwig (U.S. Patent No. 4,084,041); rejected claims 48-51 under 35 U.S.C. § 103(a) as being unpatentable over Amiel et al. in view of Nagle et al. (U.S. Patent No. 6,670,039); rejected claims 33, 37, and 43-45 under 35 U.S.C. § 103(a) as being unpatentable over Amiel et al. in view of James et al. (U.S. Patent No. 5,766,789); provisionally rejected claims 27, 28, 31, and 32 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-12 of copending application no. 10/326,257; and provisionally rejected claims 27, 28, 31, 32, 36, and 38 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-8 of copending application no. 10/183,471.

By this Reply, Applicants have amended claims 27 and 36 and have canceled claims 34 and 42 without prejudice or disclaimer of the subject matter thereof.

Applicants respectfully traverse the rejection of claims 27-29, 31, 32, 34, 36, 38-40, and 42 under 35 U.S.C. § 102(e) for at least the reason that Amiel et al. fails to disclose every claim element. For example, both independent claim 27 and independent claim include, *inter alia*, an acidic electrolytic solution filling a volume between the positive and negative plates. Amiel et al. fails to disclose at least the claimed acidic electrolytic solution and relies, instead, upon an alkaline electrolyte. (col.

4, lines 58-61.) Because Amiel et al. fails to disclose every claim element, the Section 102(e) rejection of claims 27-29, 31, 32, 34, 36, 38-40, and 42 should be withdrawn.

Applicants respectfully traverse the rejection of claims 27-29, 31, 32, 36, and 38-40 under 35 U.S.C. § 102(b) for at least the reason that Saito et al. fails to disclose every claim element. As noted above, both independent claim 27 and independent claim include, *inter alia*, an acidic electrolytic solution filling a volume between the positive and negative plates. Rather than the claimed acidic electrolytic solution, the device of Saito et al. includes a solid electrolyte of beta alumina. (col. 4, lines 21-23.) Because Saito et al. fails to disclose every claim element, the Section 102(b) rejection of claims 27-29, 31, 32, 36, and 38-40 is improper and should be withdrawn.

Applicants respectfully traverse the rejection of claims 30, 46, 47, and 52 under 35 U.S.C. § 103(a) as being unpatentable over Amiel et al. in view of Ludwig. No *prima facie* case of obviousness has been established with respect to claims 30, 46, 47, and 52 for at least the reason that neither Amiel et al. nor Ludwig, taken either alone or in combination, teaches or suggests every claim element. Amiel et al. fails to teach or suggest at least an acidic electrolytic solution filling a volume between the positive and negative plates, as included in independent claims 27 and 36, upon one of which claims 30, 46, 47, and 52 depend. Ludwig, which was cited only for its alleged disclosure of graphite foam, fails to remedy this deficiency. Because no combination of Amiel et al. and Ludwig teaches or suggests every claim element, the Section 103(a) rejection of claims 30, 46, 47, and 52 is improper and should be withdrawn.

Applicants respectfully traverse the rejection of claims 48-51 under 35 U.S.C. § 103(a) as being unpatentable over Amiel et al. in view of Nagle et al. No *prima facie*

case of obviousness has been established with respect to claims 48-51 for at least the reason that neither Amiel et al. nor Nagle et al., taken either alone or in combination, teaches or suggests every claim element. Amiel et al. fails to teach or suggest at least an acidic electrolytic solution filling a volume between the positive and negative plates, as included in independent claims 27 and 36, upon one of which claims 48-51 depend. Nagle et al., which was cited only for its alleged disclosure of carbonized wood, fails to remedy this deficiency. Because no combination of Amiel et al. and Nagle et al. teaches or suggests every claim element, the Section 103(a) rejection of claims 48-51 is improper and should be withdrawn.

Applicants respectfully traverse the rejection of claims 33, 37, and 43-45 under 35 U.S.C. § 103(a) as being unpatentable over Amiel et al. in view of James et al. No *prima facie* case of obviousness has been established with respect to claims 33, 37, and 43-45 for at least the reason that there is no suggestion to combine Amiel et al. and James et al. in the manner suggested by the Examiner. Specifically, the Examiner has maintained that it would have been obvious to one of ordinary skill in the art to use the carbon foam current collector of Amiel et al. in the lead acid battery of James et al. Neither reference, however, suggests making such a combination.

“The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination.” M.P.E.P. § 2143.01 Here, neither Amiel et al. nor James et al. suggests the desirability of incorporating a carbon foam current collector into a lead acid battery.

While, in the background section, Amiel et al. includes at least a minimal disclosure of carbon foam (col. 1, lines 32-33), Amiel et al. fails to disclose or suggest

incorporating such a carbon foam material into a lead acid battery. In fact, Amiel et al. nowhere even mentions lead acid batteries. Instead, Amiel et al. focuses solely on nickel based battery chemistries. (Col. 3, lines 45-60.) With no disclosure of a lead acid battery, it necessarily follows that there is no suggestion in Amiel et al. to incorporate a carbon foam structure into a lead acid battery (i.e., a battery chemistry including a significantly different chemical environment, as compared to nickel based battery chemistries).

Similarly, there is no suggestion in James et al. to include a carbon foam current collector into a lead acid battery. While James et al. discloses lead acid batteries, nowhere does James et al. even mention carbon foam or suggest the possibility of using a carbon foam current collector in a lead acid battery.

Because neither Amiel et al. nor James et al. discloses or suggests including a carbon foam current collector in a lead acid battery, no *prima facie* case of obviousness has been established with respect to claims 33, 37, and 43-45. Accordingly, the Section 103(a) rejection of these claims is improper and should be withdrawn.

Applicants respectfully traverse the provisional rejection of claims 27, 28, 31, and 32 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-12 of copending application no. 10/326,257. While the Examiner has properly recognized that claims 1-12 of the '257 application include, among other elements, an insulating mat disposed between the negative current collector and the at least one carbon foam positive current collector, this is not the only difference between claims 1-12 of the '257 patent and claims 27, 28, 31, and 32 of the present application. For example, claims 1-12 of the '257 patent also include a negative

current collector that "at least partially surrounds" at least one carbon foam positive current collector--a feature not included in the claims of the present application.

Applicants respectfully submit that in view of at least one of these differences, claims 27, 28, 31, and 32 of the present application are patentably distinct from claims 1-12 of the '257 application. Accordingly, this provisional double patenting rejection of claims 27, 28, 31, and 32 is improper and should be withdrawn.


Applicants respectfully traverse the provisional rejection of claims 27, 28, 31, 32, 36, and 38 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-8 of copending application no. 10/183,471. Application no. 10/183,471 has been allowed to go abandoned, and therefore, this double patenting rejection of claims 27, 28, 31, and 32 is moot and should be withdrawn.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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